91-03972/

ANNUAL REPORT

1989-90

OCCUPATIONAL HEALTH AND SAFETY HERITAGE GRANT PROGRAM

Heritage Fund

1989-90 was the ninth year of the Occupational Health and Safety Heritage Grant Program. The program began in 1981, when a $10 million capital investment was made from the Alberta Heritage Savings Trust Fund. The program's mandate is to support education, research, and conference projects which address health and safety problems related to work.

The Grant Program is one of Alberta Occupational Health and Safety's major preventive initiatives. The program works in partnership with industry, labour, post-secondary institutions and others encouraging Albertans to become involved in finding effective solutions to health and safety problems in the workplace.

This year, two large projects were developed with the universities of Alberta and Calgary. The awards will evaluate ways to effectively apply in a hospital setting what is known about reducing injuries, and establish programs and services for smaller businesses.

Other projects started this year focus on increasing injury awareness among teenagers; improving training for pesticide applicators; developing standards for operating brush removal equipment and sound

From an industry association: "We have to book larger and larger rooms for our safety meetings, as more and more companies are interested in safety."

herbicide use; safety and loss management instruction for university students; and research on protective clothing and isocyanates.

Completed grant projects were promoted throughout the year. A news conference announced a safety training program for taxi drivers. An international conference for researchers brought industry and the research community together to discuss new knowledge on the effects of hydrogen sulfide. The results of other projects were promoted through other means, including articles in journals, magazines and newspapers, radio interviews and presentations to both industry and educators.

STANDING COMMITTEE RECOMMENDATIONS

Two recommendations concerning the Heritage Grant Program were contained in the March 1990 *Report of the Standing Committee on the Alberta Heritage Savings Trust Fund Act*. Both have been acted on.

Recommendation four says, "That the Occupational Health Research and Safety Heritage Grant Program coordinate with AADAC and the Alberta Family Life Drug Abuse Foundation in research into the use of alcohol and drugs in the workplace."

A research project is being designed in conjunction with AADAC to address this area of concern. The project will involve Alberta workers and business people to determine the extent and causes of alcohol and drug use, the effects on occupational safety and the workplace, and whether existing services and programs from the private and non-profit sectors address the problems the research uncovers.

The Grant Program supported the formation of the Alberta Construction Safety Association. The Association is providing safety training to workers of over 14,000 employers.

Recommendation ten says, "That funding for research by Occupational Health and Safety be extended another three years."

A review of the program's impact found that illnesses and injuries have been reduced in several high hazard industries, where the Grant Program has provided significant support.

The forestry industry's WCB claim rate decreased 42% between 1984-89, a period when industry activity was increasing. Awards to the forestry industry beginning in 1984 resulted in the development of extensive training materials and courses for workers.

The oil and gas well drilling and servicing industries' lost-time claim rate has declined 54% since 1985. The Grant Program supported the development of training courses and materials applicable to this industry.

Enrollment in the Occupational Health Nursing Certificate Program at Grant MacEwan Community College has increased from 13 to 300, since a grant enabled the program to be taken by distance learning.

The welding industry claim rate has dropped 33% since the introduction of the Welding Safety materials developed by NAIT in 1986.

The program has also increased non-government involvement in improving workplace health and safety, increasing the numbers and expertise of individuals involved in occupational health and safety, and established ongoing programs in industry and educational associations to address occupational health and safety concerns.

Discussions have been held with many departments, agencies, safety organizations and professionals regarding the direction the Heritage Grant Program should follow. The program is now seeking a renewed mandate.

The "Standards and Good Practices for Industrial Vegetation Management Manual," developed in Alberta, will be used to develop national standards.

4 PROGRAM STATISTICS

From 1981 to 1990 the Grant Program received 511 applications. Of these, 186 were approved.

Sixteen applications were approved in 1989-90, compared to 21 the previous year.

Figure A (page 9) illustrates the Grant Program's expenditures from 1981 to 1990. Grant expenditures increased slightly compared to the previous fiscal year.

Funds awarded by project type are shown in Figure B (page 10). Education projects have received 57% of all grant funds. Research projects have received 40% of all grant funds, and conferences have received the remaining 3%.

Fifty-four percent of all projects have outcomes or results which can be applied in more than one industry. For example, a series of videotapes on welding hazards is being used by firms in many different industries. Most of these industries have very high accident rates. They include oil and gas well drilling and servicing, forestry, transportation, construction, and mining.

From a researcher:
"I have received funds from industry to continue the research initiated by the grant project. The research team will continue to work in safety related research. We have found a direction."

Technical institutes, colleges, vocational centres, and universities have received 58% of grant funds, reflecting the 1985 recommendation of the Standing Committee on the Alberta Heritage Savings Trust Fund Act, placing special emphasis on involving postsecondary educational institutions. Fifteen percent of grant funds were awarded to employer or industry associations. Other groups receiving funds include unions, professional associations, consultants,

PROMOTION OF PROJECT RESULTS

Industry, labour and professional associations receive grants to address health and safety problems at the workplace. By funding these groups, which are in a position to directly apply the solutions developed, the Grant Program aims to maximize benefits to Alberta workers.

Educational institutions have also received significant support from the Grant Program. Institutions across Alberta have developed new courses, or updated existing courses, and continue to offer these to the public. The benefits will be long lasting as workers and students are able to pursue professional and job-related occupational health and safety training which was previously not available in this province.

Since 1987 the Grant Program has surveyed grant recipients to find out how they have disseminated the results of their projects. Figure C shows how the copies of reports, booklets and videotapes in circulation has increased from 48,320 in 1987 to 159,650 in 1990. Information was received from 125 completed projects. Since 166 projects are completed, information is available for about 75% of all completed projects. Not all projects have records of the number of publications distributed, presentations made or workers trained. The results presented in the following table understate the actual dissemination of results and use of grant produced materials.

Research focusing on three kinds of workers' personal protective equipment has led manufacturers to re-evaluate their designs.

In addition, all research reports, books and manuals produced with Grant Program sponsorship have been placed in the Alberta Occupational Health and Safety Library for public circulation. The library serves industry and the public throughout Alberta. Albertans can also order copies of project reports from Alberta Occupational Health and Safety's regional offices. Materials are also sent to the National

Library of Canada and the Canadian Centre for Occupational Health and Safety.

Reports describing ongoing and completed projects are also distributed to the public. The reports are provided to a variety of groups and individuals including: occupational health nurses and safety practitioners employed in industry, organizations interested in occupational health and safety (such as hospital associations and municipalities), and individual workers and organized labour. Information on funded projects is also available from the status reports, the Occupational Health and Safety magazine, the Canadian Centre for Occupational Health and Safety data base, the news media, and from grant recipients.

Impact of 125 Completed Grant Projects

Copies of reports, booklets, videotapes in circulation	159,650
Courses available from educational institutions and industry groups	29
Workers, employers, and health and safety professionals trained in these courses	38,297
Presentations of results at conferences, industry and professional association meetings	368
Research reports produced	72
Books and manuals published	30
Articles in journals	169
Papers in conference proceedings	50
Videotapes or films produced	22
Public use of videotapes from the Occupational Health and Safety Library	1,352
Articles in the Occupational Health and Safety Magazine on Grant Projects	81

NEW OCCUPATIONAL HEALTH PROGRAMS

Two awards were made early in 1990 which will establish new occupational health programs in Alberta. Both the University of Alberta and the University of Calgary will undertake these initiatives within their Faculties of Medicine.

The universities provide a special opportunity to improve services and programs available to Alberta workers and employers. University staff are the producers of new information such as, the health effects of industrial chemicals, or how repetitive movements can cause injuries. The researchers and practitioners at Alberta universities not only generate new knowledge, but are aware of important new developments elsewhere. The initiatives at the universities of Alberta and Calgary will capitalize on the benefits of transferring state-of-the-art developments to Alberta workplaces.

Each university will pursue different approaches, which will maximize the impact of their initiatives. The University of Alberta program will operate as, "The Occupational Health Resource Centre," for a five year period. New programs and activities will complement those in the existing Occupational Health Program. The major new activity is related to occupational hazards in health care facilities. Many health care facilities in Alberta will be participating in a Workers' Compensation Board program aimed at preventing injuries. The Resource Centre will look at better ways to use existing knowledge of ways to prevent injuries. This knowledge of how to apply knowledge, can then be used when designing and implementing programs at other types of workplaces. Back injury prevention is of special interest. Other University of Alberta initiatives will include clinical consultation in occupational medicine; tracking of occupational diseases which may signal serious workplace problems; continuing medical education in occupational health for family doctors; and occupational medicine training for students in medicine and other faculties.

The University of Calgary is establishing the "Southern Alberta Occupational Health and Safety Resource Program." The Program will focus on the needs of the workers and employers in small and medium size businesses. Small business owners and managers usually have to perform the occupational health and safety responsibilities of the firm along with all their other duties. Outside assistance can make it easier for the company to ensure that the workers' health is protected.

From a researcher: "The grant program is very valuable. In the long run, all workplaces in Alberta will benefit."

In first year of this four year program, programs and services will be developed and promoted to small and medium-size businesses. The programs will include a telephone enquiry service to provide information on occupational health and safety; a referral service to sources of assistance; investigation of health and safety problems in the workplace; educational programs for individuals and groups on promoting health, and disease and accident prevention; and a resource centre for technical information on occupational health and safety issues.

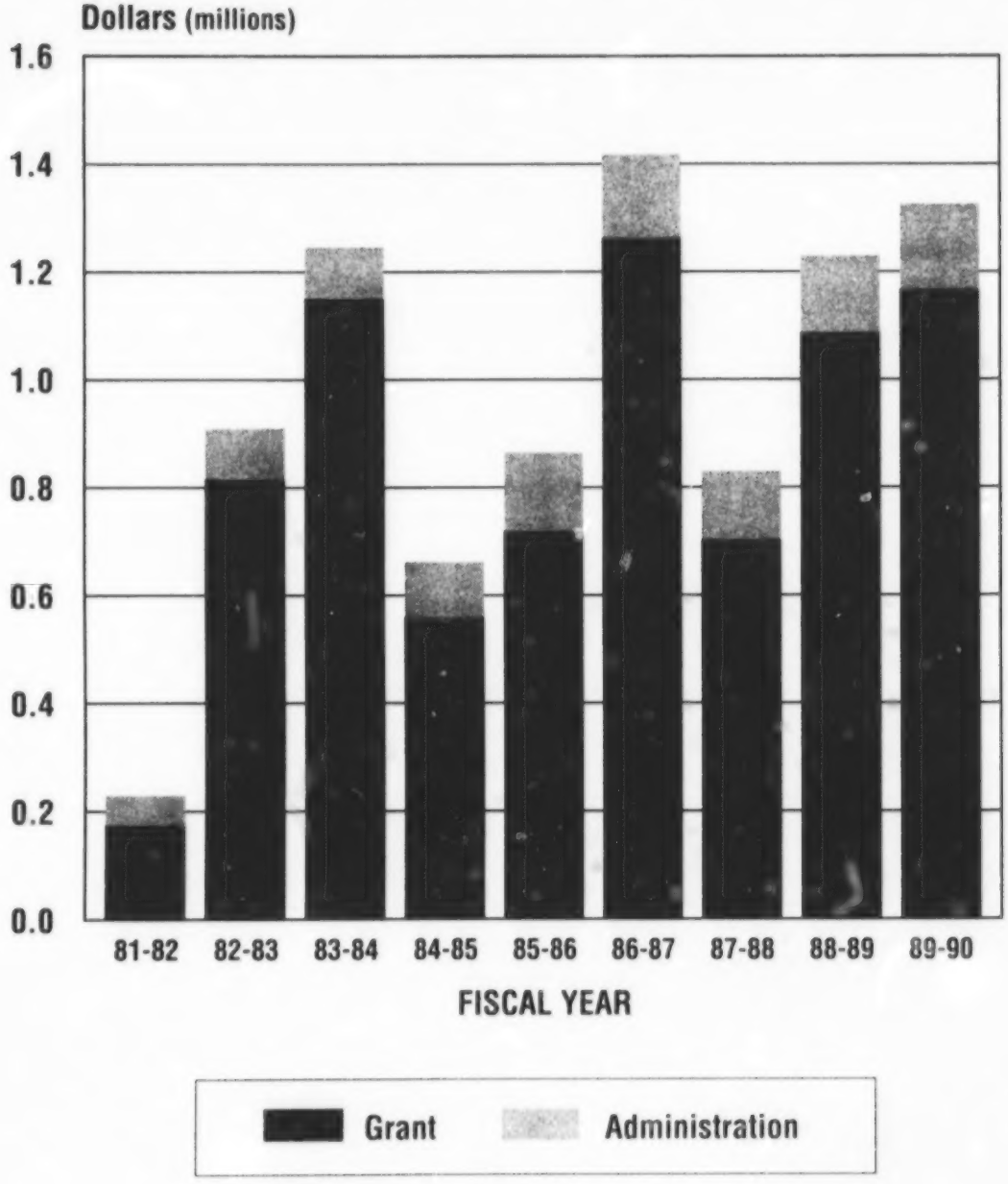
Each award will be monitored by an Advisory Committee, with members from outside the university. Progress will be reported annually.

From an industry association: "If not for the grant program we probably could not have proceeded with these projects. Occupational health and safety is very important and the grant program plays an important role in pursuing the issue. The grant program is a very valuable program that should continue."

FIGURE A 9

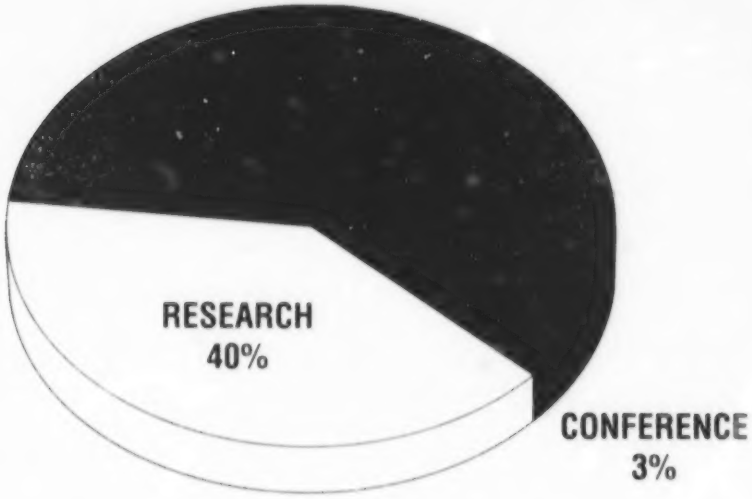
PROGRAM EXPENDITURES

April 1981 - March 1990



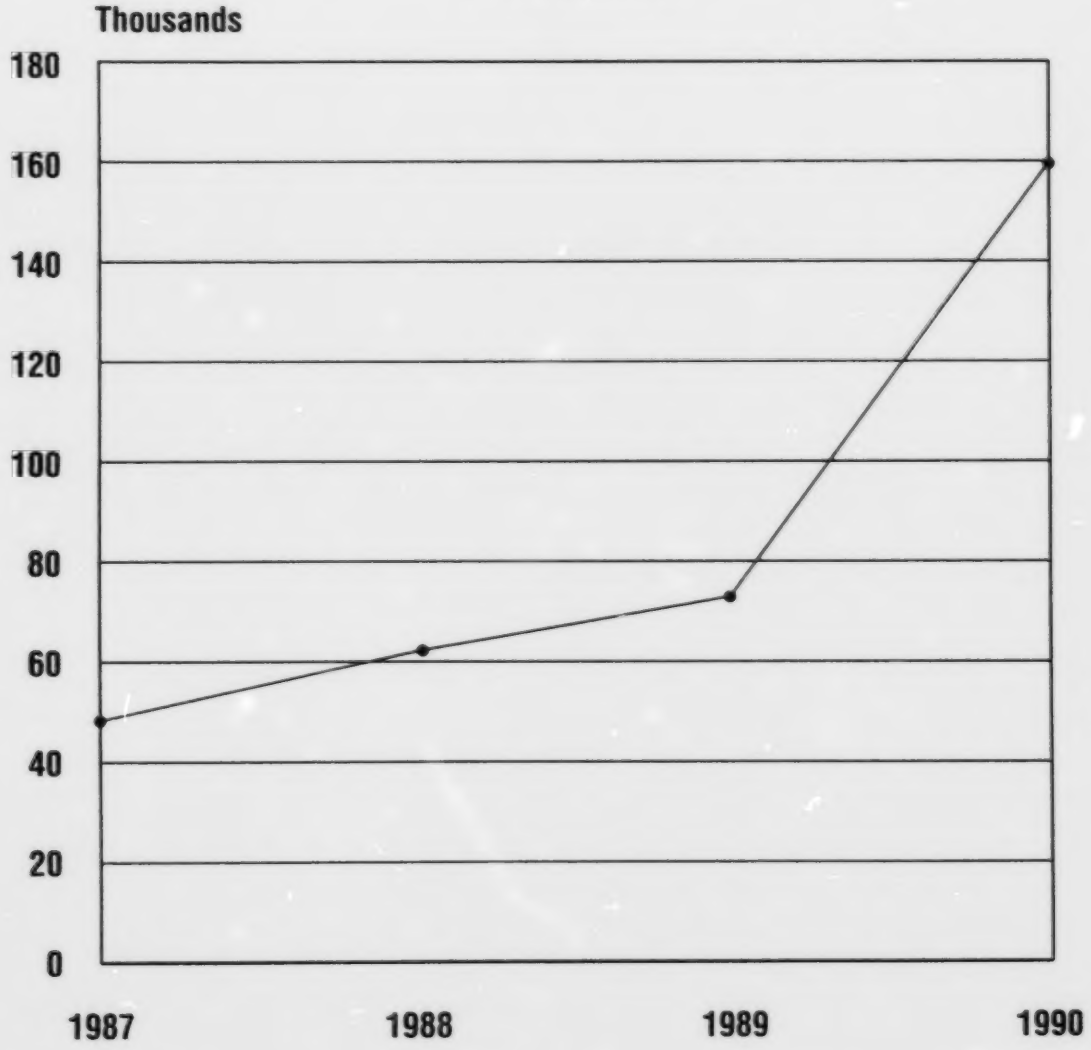
FUNDS AWARDED BY GRANT TYPE

April 1981 - March 1990



F I G U R E C 11

Copies of Reports, Booklets and Videotapes in Circulation



Types of Awards

Education Grants

Three types of education projects are funded. Program Development Awards are used to develop innovative educational programs which emphasize the recognition, avoidance and control of hazards related to work. Funds may also be provided to evaluate the effectiveness of new educational programs. Program Development projects are the most common type of education grant awarded.

Visiting Scholar Awards sponsor scholars or researchers travelling to Alberta for the purpose of information exchange through seminars, lectures and collaboration with Albertans in the development of new techniques or approaches in the field of occupational health and safety.

Training Assistance Awards provide support for individuals to pursue further education in disciplines and subjects related to occupational health and safety, such as occupational hygiene or occupational health nursing.

Research Grants

Research grants support scientific activities designed to increase the understanding of occupational health and safety problems, and to develop and assess new strategies for dealing with problems. Research is conducted to fill gaps in knowledge or provide information required to solve problems. With new knowledge, it is often possible to develop both technical and procedural solutions to safety problems. Solutions may include the design of new equipment, and the development of safe operating guidelines and procedures.

Conference Grants

Conference awards provide partial support for conferences in Alberta which increase understanding and awareness of health and safety issues related to work. Grant funds are normally used to defray the costs of bringing experts to the province, and of planning activities. Albertans may also receive support to attend conferences which enhance the knowledge and expertise of occupational health and safety practitioners in the province.

Projects Approved Between April 1989 and March 1990

Education Projects

HEROES Program for Injury Awareness and Prevention Among Teenagers
Faculty of Medicine,
University of Alberta ($50,000)

HEROES is an upbeat awareness program aimed at preventing serious injuries – particularly head and spinal cord injuries – to teenagers. The program presents information on safety on the job, first aid, and driving and recreation safety. HEROES is touring senior high schools in Alberta. The presentations include a 16-projector sound and slide show, demonstrations, and a question-answer period with injury survivors and paramedics. This project is funded in partnership with community and industry groups.

Safety and Loss Management Instruction
Faculty of Engineering,
University of Alberta ($100,000)

The Faculty is running a fund-raising campaign to establish a Chair in Safety and Loss Management. The Chair will become the focus of occupational safety within the Faculty of Engineering. This grant provides funding for two academic years, allowing occupational health and safety instruction for undergraduate engineering and business students to continue until the Chair is established in mid-1992.

Pesticide Safety for Industrial Applicators
Abraxas Communications Ltd. ($18,400)

A safety training videotape is being produced for workers who apply chemicals such as pesticides and herbicides. There are no other videotapes available which review the safety aspects for workers. Topics covered include understanding hazard labels, choosing and wearing protective clothing and equipment, first aid supplies, fire extinguisher selection, and spill clean-up. This project is funded in partnership with industry and other provincial government departments.

Occupational Health and Safety Resource Centre
Faculty of Medicine,
University of Alberta ($500,000)

The University of Alberta will undertake research in a hospital setting, which will measure the effectiveness of different strategies for having workers and managers adopt safe work practices using existing knowledge. Hospitals account for many lost-time accidents, including many back injuries. The grant will also support clinical consultation in occupational medicine for injured or ill workers, occupational medicine, medical education for practicing physicians, occupational medicine training for students and residents, and occupational health teaching in other programs at the university. The project will last five years.

Southern Alberta Occupational Health and Safety Resource Program
Faculty of Medicine,
University of Calgary ($500,000)

The University of Calgary will design, provide, and evaluate occupational health services for small business workers and employers in a four year project. Workers and employers will be able to telephone the Program for information and referrals to educational programs and other services. The Program will also provide on-site inspections and assistance in response to problems identified by small businesses. Education programs will be offered on health promotion and disease and accident prevention. The Program will also augment its reference collection in order to respond to enquiries.

Standards and Good Practices for Industrial Vegetation Management
Industrial Vegetation Management Association of Alberta ($15,000)

The Grant Program provided partial funding for the development of a standards manual. The manual describes basic standards for safe and environmentally sound herbicide use, and discusses both manual and mechanical methods for clearing brush from, for example, power line right-of-ways. The standards cover worker protection, training, safe field work practices, and emergency response. National standards are now being developed, based on this manual. This project was undertaken in partnership with community and industry sponsors.

Development of Safety Engineering and Management Instructional Materials Phase II
Faculty of Engineering, University of Alberta ($30,000)

The Faculty of Engineering has developed a two-term course in safety engineering and management for final-year undergraduate business and engineering students. The Faculty has established important ties with industry and government, and the courses provide practical safety information and skills to future professional managers and engineers.

Canadian Occupational Health and Safety Week – Phases I and II
Canadian Society of Safety Engineering (Alberta) ($38,500)

Two projects promoted the 1989 and 1990 Occupational Health and Safety Weeks throughout Alberta. The projects aimed at increasing awareness of occupational health and safety issues with the public and industry. Educational materials were produced on the themes "Safety Takes Teamwork" and "Young and Alive"; information was distributed in shopping malls; pins, buttons, and stickers were distributed; advertisements were placed in newspapers and on the radio; and an occupational safety seminar was held.

WHMIS Worker Education and Training for Workers Speaking English as a Second Language
Alberta Vocational Centre, Calgary ($22,500)

A first in Canada, the Alberta Vocational Centre has developed a videotape that uses animation to explain the meaning of the six WHMIS warning symbols. The national Workplace Hazardous Materials Information System (WHMIS) provides basic information on hazardous materials to alert workers to the potential dangers. The materials are directed at workers who, because of language or reading difficulties, have difficulty learning from books.

Hanna Injury Prevention Program Development
Hanna Injury Prevention Project ($5,250)

Hanna is aiming to reduce injuries in the town and surrounding area. By increasing the cooperative efforts of individuals and organizations, the project will increase the community's awareness of injury and will educate residents about injury prevention. Occupational safety, home safety, farm safety and recreational safety will be included in the project's activities. Hanna will serve as a model of how a small community can establish itself as a model safe community.

Occupational Health Promotion
Alberta Occupational Health Nurses Association ($5,000)

The Association will carry out educational activities to promote occupational health around the province. The activities will be directed at the public, as well as at workers and employers. A portable display and information brochures will be developed.

Research Projects

Evaluation of Flash Fire Protective Clothing Using an Instrumented Mannequin
Departments of Clothing and Textiles and Mechanical Engineering, University of Alberta ($82,900)

Most workers caught in work site fires or explosions suffer injuries resulting from their clothing catching fire, rather than from the initial flash of fire. Drs. Betty Crown and James Dale are modifying the system they developed which predicts the skin burns resulting from a flash fire. Once the system has been upgraded, the system will help Alberta industry to evaluate the protective qualities of garments to withstand catching fire and burning, in the event of an explosion. Industry will be able to make more informed decisions as to which garments offer the best protection for workers.

Biological Monitoring of Occupational Exposure to Isocyanates
Foothills Provincial General Hospital ($64,200)

Isocyanates can be found in several industrial settings. The chemicals are present in some paints, lacquers, adhesives, rigid foam insulations, and flexible foams used in constructing furniture. Long-term low level exposure to isocyanates is believed to cause breathing problems. Presently, worker exposure to isocyanates is judged by taking air samples at the work site. If the new methods are successful, a lab test will be available to measure worker exposure. The tests would also be valuable to monitor overall workplace exposure, and to test the adequacy of protective clothing and breathing apparatus. Dr. Sui Chan is studying how the body breaks down isocyanates, and developing a way to measure low levels of isocyanates in bodily fluids.

Conference Projects

Second Annual Injury in Alberta Conference
Edmonton Board of Health '$9,840)

The award allowed thirty-two young workers and individuals without a sponsoring agency to attend this conference. The conference had a strong emphasis on preventing occupational injuries. Attendees exchanged ideas and were able to take new approaches and information back to their communities and workplaces.

A New Vision of Health and Safety Workers' Health Centre ($315)

Assistance was given to an occupational health nurse, to attend an occupational health and safety conference held in Banff. The nurse's attendance added a labour perspective to the conference, and included the Centre in an important discussion on the status of occupational health and safety in Alberta.

Grant Steering Committee

The Grant Steering Committee was established in April 1981 by the Minister responsible for Workers' Health, Safety and Compensation, to ensure that a broad range of perspectives and expertise contributed to development of the Grant Program. Following a recommendation of the Standing Committee on the Alberta Heritage Savings Trust Fund Act, four public members were appointed to the Committee in January 1985.

The Committee reviews applications for grants and makes recommendations regarding funding. The Committee also advises the Minister responsible for Occupational Health and Safety generally on matters related to operation of the program. Such matters may include program administration, funding priorities and promotional activities.

Between April 1981 and March 1990 the Committee met 73 times to review and make recommendations on program guidelines, funding criteria and grant applications.

On March 31,1990, committee membership included four public representatives and seven representatives from six provincial government departments and agencies.

PUBLIC MEMBERS

Labour Representative

Mr. S. Lee
Edmonton

Employer Representatives

Mr. C. Delbridge
Edmonton

Mr. C. Turner
Grande Prairie

Public Representative

Mr. K. McBeth
Edmonton

ADVANCED EDUCATION

Mr. W. Novasky, Director, Program Coordination Branch

CAREER DEVELOPMENT AND EMPLOYMENT

Mr. D. Coupal, Planning Coordinator

LABOUR

Mr. A. Kennedy, Assistant Deputy Minister, General
Safety Services Division

OCCUPATIONAL HEALTH AND SAFETY

Mr. W. Rozel, Executive Director, Health and Safety Programs

Mr. L. Sorochan, Manager, Education Services

PERSONNEL ADMINISTRATION

Mr. H. Gerling, Manager, Occupational Health and Safety Branch

WORKERS' COMPENSATION BOARD

Mr. W.E. McDonald, Vice-President and Chief Development Officer, Corporate Development